

REMARKS

In the Office Action dated May 1, 2006, claims 1-31 were presented for examination. The Abstract was objected to as containing numbers in parentheses. The Specification was objected to as failed to provide proper antecedent basis for the claimed subject matter. Claims 17-22 were rejection under 35 U.S.C. §101. Claims 1-5, 7-13, 15-19, 21-23, 26, and 27 were rejected under 35 U.S.C. §103(a) over *Yeager et al.*, U.S. Patent Publication No. 2005/0086300, in view of *Langfahl, Jr.*, U.S. Patent No. 6,031,528. Claim 28 was rejected under 35 U.S.C. §103(a) as being unpatentable over *Carter et al.*, U.S. Patent No. 5,909,540, in view of *Yeager*, U.S. Patent Publication No. 2005/0086300. Claims 29-31 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Carter et al.*, U.S. Patent No. 5,909,540, in view of *Yeager*, U.S. Patent Publication No. 2005/0086300, and further in view of *Langfahl, Jr.*, U.S. Patent No. 6,031,528. Claims 6, 14, and 20 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Yeager*, U.S. Patent Publication No. 2005/0086300 in view of *Langfahl, Jr.*, U.S. Patent No. 6,031,528, and in further view of *Ron Jachim*. Claim 24 was rejected under 35 U.S.C. §103(a) as being unpatentable over *Yeager*, U.S. Patent Publication No. 2005/0086300 in view of *Langfahl, Jr.*, U.S. Patent No. 6,031,528, in view of *Hirst et al.*, U.S. Patent No. 6,581,166, in further view of *Naeimi et al.*, U.S. Patent No. 6,363,416. Claim 25 was rejected under 35 U.S.C. §103(a) as being unpatentable over *Yeager* in view of *Langfahl, Jr.* in view of *Gadir et al.*, U.S. Patent Publication No. 2003/0018927.

The following remarks are provided in support of the pending claims and responsive to the Office Action of May 1, 2006 for the pending application.

I. Objected to the Abstract

In the Office Action dated May 1, 2006, the Examiner objected to the Abstract as containing numbers in parentheses. Applicants have amended the Abstract to remove the numbers in parentheses. Accordingly, Applicants respectfully request that the Examiner remove this objection.

II. Objection to the Specification

In the Office Action dated May 1, 2006, the Examiner objected to the Specification as failing to provide proper antecedent basis for the claimed subject matter. More specifically, the Examiner indicated that the “recordable data storage medium” and “modulated carrier signal” of claim 18 is not provided in the specification. Per the rejection of claims 17-22 under 35 U.S.C. §101 discussed below, Applicants have amended the claims to remove the limitation pertaining to a “modulated carrier signal”. As such, Applicants have amended the specification on the paragraph beginning of page 3, line 14 to provide proper antecedent basis for the limitations of claims 17-22. Since this language was present in the original claims, as noted by the Examiner, the amendment has not caused addition of new subject matter. Accordingly, Applicants respectfully request that the Examiner remove the objection to the specification.

III. Objection to the claims

In the Office Action dated May 1, 2006, the Examiner objected to claims 9-16. More specifically, the Examiner has objected to the term “multiprocessor” in the preamble. Applicants have amended claim 9 to replace the term “multiprocessor” with “multi-node,” as suggested by the Examiner. No new subject matter has been added by this amendment. Accordingly, Applicants respectfully request removal of the objection to claims 9-16.

IV. Rejection of claims 17-22 under 35 U.S.C. §101

In the Office Action dated May 1, 2006, the Examiner rejected claims 17-22 as not being limited to statutory embodiments. More specifically, the Examiner raised an issue with the language “signal bearing medium” in claim 17. Applicants have amended claim 17 to remove the language “signal bearing medium,” and have also amended claim 18 to remove the language “modulated carrier signal.” The amendments to claims 17 and 18 remove the issues raised by the Examiner pertaining to non-statutory subject matter. Accordingly, Applicant respectfully requests that the Examiner remove the rejection of claims 17-22 under 35 U.S.C. §101.

V. Rejection of Claims 1-5, 7-13, 15-19, 21-23, 26, and 27 under 35 U.S.C. §103(a)

In the Official Action of May 1, 2006, the Examiner rejected claims 1-5, 7-13, 15-19-,

21-23, 26, and 27 under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent Publication No. 2005/0086300 to *Yeager et al.* (hereinafter *Yeager*) in view of U.S. Patent No. 6,031,528 to *Langfahl, Jr.* (hereinafter *Langfahl*).

Yeager discloses a peer-to-peer network computing system. More specifically, *Yeager* discloses monitoring among the nodes in the network for a variety of purposes. Among the monitoring techniques disclosed is a heartbeat.

Langfahl discloses a diagnostic tool for a computer network, wherein the tool is graphically based. The tool disclosed is used to test connectivity among the devices in the network. “The ICMP thread sends a series of echo requests at step 70. When all the echo requests are complete, the thread terminates and the Ping is complete.” Col. 5, lines 27-29.

Neither *Yeager* nor *Langfahl* makes a teaching, suggestion, or use for an issuance of an ICMP echo in response to detection of loss of a heartbeat. *Yeager* does not even teach or suggest use of an ICMP echo in a computer network environment. Similarly, *Langfahl* teaches a computer network environment wherein the diagnostic tool implemented is an ICMP echo. In *Yeager*, there is no teaching, suggestion, or use of an ICMP echo, and in *Langfahl* there is no teaching, suggestion, or use of a heartbeat. For a rejection to stand under 35 U.S.C. § 103(a), there must be a suggestion or motivation in the references themselves to modify the reference or combine the teachings.¹ Neither prior art reference contains a teaching, suggestion, or motivation for the combination suggested by the Examiner. Accordingly, it is Applicants’ position that there is no motivation, suggestion or teaching to combine the two references under the standard of 35 U.S.C. § 103(a).

In order to combine prior art references under 35 U.S.C. § 103(a), the prior art references must have a suggestion or motivation to modify the references or combine the teachings.² “The

¹ See MPEP § 2143.

² See MPEP § 2143.

mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination.”³ In other words, “the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in Applicants’ disclosure.”⁴ As noted by the Examiner, *Yeager* fails to teach “issuing an ICMP echo to peer nodes in said cluster and said gateway through said network in response to a heartbeat loss detection; and analyze a response from said echo to determine location of a fault in said cluster.”⁵ The Examiner cited *Langfahl* to support the contention that this missing element exists. However, there is no motivation in the prior art references for combining *Yeager* and *Langfahl*. Rather, the motivation for such a combinations stems from the language in Applicants’ claims.

Based upon *Yeager*’s teaching, it is clear that the Examiner is taking the elements of Applicants’ pending claims and combining them in an improper manner. “It is impermissible to use the claimed invention as an instructions manual or ‘template’ to piece together the teachings of the prior art so that the claimed invention is rendered obvious.”⁶ Yet that is the very process that the Examiner has attempted to undertake. Most patents may be considered combination patents that incorporates different elements from the prior art to achieve a new and useful apparatus and/or method. Although Applicants’ invention may appear to combine elements found in different prior art disclosures, it is the motivation to combine the references that must be in the prior art and not in Applicants’ pending claims.⁷ In the present case, there is no motivation in the prior art to combine the references because such a combination would be beyond the scope and teaching of *Yeager*.

³ MPEP §2143, citing (*In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990)

⁴ MPEP §2143, citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

⁵ Office Action of May 1, 2006, page 3.

⁶ *In re Fritch*, 972 F.2d 1260, 1266, 23 USPQ 2d 1780 (Fed. Cir. 1992), citing *In re Gorman*, 933 F.2d 982, 987 (Fed. Cir. 1991).

⁷ MPEP §2143, citing (*In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

It is well settled that each statement of obviousness for the purpose of combining each of the numerous references of record must be found and suggested in the references themselves and not only in the fertile mind of the Examiner. The conclusive statements of the Examiner must be based upon specific evidence, suggestions and findings in the references of record relied upon by the Examiner in the rejection of the claimed subject matter. It is respectfully submitted that the record before us lacks any valid reasons to combine the references in the manner done so by the Examiner and contains unsupported reasoning suggested by the Examiner. The Examiner has not established a prima facie case of obviousness with respect to the aforesaid set of claims, there being no motivation to combine the references other than that disclosed in the Applicants' specification. "The best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references."⁸ It is respectfully suggested that the Examiner's rejection under 35 U.S.C. § 103(a) which contains neither teachings nor motivation to combine the references is without merit and must be withdrawn. Accordingly, Applicants respectfully contend that the combination of *Yeager* with *Langfahl* does not meet the standard set by the CAFC's interpretation of 35 U.S.C. § 103(a), and respectfully requests that the Examiner remove the rejection and direct allowance of claims 1, 9, 17, and 23.

The Examiner rejected claims 2, 10, and 19 under 35 U.S.C. § 103(a) as being unpatentable over *Yeager* in view of *Langfahl*. To uphold a rejection under 35 U.S.C. § 103(a) for a dependent claim, all the claim limitations must be taught or suggested by the prior art.⁹ In other words, the prior art reference must teach or suggest all limitations of the dependent claim and the independent claim from which it depends. "If an independent claim is nonobvious under 35 U.S.C. § 103(a), then any claim depending therefrom is nonobvious."¹⁰ As shown above, Applicants' claims 1 and 9 disclose a combination of network connectivity tools including use of both a heartbeat and an ICMP echo responsive to the heartbeat. *Yeager* fails to teach use of an

⁸ *In re Dembiczak*, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999).

⁹ MPEP 2143.03 (citing *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)).

¹⁰ *Id.* (citing *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)).

ICMP echo, and *Langfahl* fails to teach use of a heartbeat. Because there is no suggestion to combine the teachings of *Yeager* and *Langfahl* outside of Applicant's claimed invention to teach all of the limitations of claims 1, 9, 17, and 23, neither reference teaches all of the limitations of dependent claims 2, 10, and 19. Accordingly, Applicants respectfully requests that the Examiner reconsider his rejection and allow claims 2, 10, and 19.

The Examiner rejected claims 3, 4, 5, 11, 12, and 13 under 35 U.S.C. §103(a) as being unpatentable over *Yeager* in view of *Langfahl*. To uphold a rejection under 35 U.S.C. § 103(a), all the claim limitations must be taught or suggested by the prior art.¹¹ In other words, the prior art reference must teach or suggest all limitations of the dependent claim and the independent claim from which it depends. As noted by the Examiner, *Yeager* fails to teach "receipt of said echo from said peer nodes for said network interface within a predefined time interval . . ."¹² Although *Langfahl* teaches use of an ICMP echo in a network computing environment, there is no teaching in *Langfahl* for the elements of claims 3, 4, 5, 11, 12, and 13. More specifically, *Langfahl* does not teach receipt of a return of the echo in a set time interval. Rather, *Langfahl* merely teaches completion of the echo requests, but does not contemplate setting a time limit on such completion. Accordingly, Applicants respectfully requests that the Examiner reconsider this rejection to claims 3, 4, 5, 11, 12, and 13 and direct allowance thereof.

The Examiner rejected claims 7, 8, 15, 16, 21, 22, and 26 under 35 U.S.C. §103(a) as being unpatentable over *Yeager* in view of *Langfahl*. To uphold a rejection under 35 U.S.C. § 103(a), all the claim limitations must be taught or suggested by the prior art.¹³ In other words, the prior art reference must teach or suggest all limitations of the dependent claim and the independent claim from which it depends. As noted by the Examiner, *Yeager* fails to teach

¹¹ MPEP 2143.03 (citing *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)).

¹² Office Action of May 1, 2006, page 5.

¹³ MPEP 2143.03 (citing *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)).

“comparing an echo response from a target node set for each network interface.”¹⁴ Although *Langfahl* teaches use of an ICMP echo in a network computing environment, there is no teaching in *Langfahl* for the elements of claims 7, 8, 15, 16, 21, 22, and 26. More specifically, *Langfahl* does not teach comparison of echo responses. As noted by the Examiner, *Langfahl* teaches a graphic display and graphically illustrating connectivity of network entities. However, it is Applicants’ position that *Langfahl* does not contemplate comparing echo responses.

And, even if one were to interpret *Langfahl*’s graphic display of network connectivity as a comparison of an echo response, claims 7, 8, 15, 16, 21, 22, and 26 are dependent claims. As shown above, Applicants’ claim 1, 9, 17, and 23 disclose a combination of network connectivity tools including use of both a heartbeat and an ICMP echo in response to a failed heartbeat. *Yeager* fails to teach use of an ICMP echo, and *Langfahl* fails to teach use of a heartbeat. Because there is no suggestion to combine the teachings of *Yeager* and *Langfahl* outside of Applicant’s claimed invention to teach all of the limitations of claims 1, 9, 17, and 23, neither reference teaches all of the limitations of dependent claims 7, 8, 15, 16, 21, 22, and 26. Accordingly, Applicant respectfully requests that the Examiner reconsider the rejection and allow claims 7, 8, 15, 16, 21, 22, and 26.

VI. Rejection of Claim 28 under 35 U.S.C. §103(a)

In the Official Action of May 1, 2006, the Examiner rejected claim 28 under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 5,909,540 to *Carter et al.* (hereinafter *Carter*) in view of *Yeager*.

Applicants remarks to *Yeager* above are hereby incorporated by reference.

U.S. Patent No. 5,909,540 to *Carter et al.* (hereinafter *Carter*) discloses a computer network with a plurality of slave devices, and use of heartbeat messages among the slave devices to independently determine connectivity of each slave to the network.

¹⁴ Office Action of May 1, 2006, page 7.

As noted by the Examiner, the heartbeat messages of *Carter* are sent among peer slaves in a network. There is no teaching, suggestion, or motivation for configuring the computing network of *Carter* to incorporate a gateway within the network. Although both *Carter* and *Yeager* teach use of a heartbeat message in a computing network, there is no teaching, suggestion, or motivation within *Carter* to modify the network to employ a gateway therein. For a rejection to stand under 35 U.S.C. §103(a), there must be a suggestion or motivation in the references themselves to modify the reference or combine the teachings.¹⁵ Applicants' invention discloses determining a heartbeat loss in a network configured with a gateway. As such, Applicant's invention incorporates both a heartbeat diagnostic tool and a computing network configured with a gateway for a network interface. Accordingly, it is Applicants' position that there is no motivation, suggestion or teaching to combine the references under the standard of 35 U.S.C. §103(a).

In order to combine prior art references under 35 U.S.C. §103(a), the prior art references must have a suggestion or motivation to modify the references or combine the teachings.¹⁶ "The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination."¹⁷ In other words, "the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in Applicants' disclosure."¹⁸ As noted by the Examiner, *Carter* fails to teach a computing network "with a gateway for a network interface."¹⁹ The Examiner cited *Yeager* to support the contention that this missing element exists. However, there is no motivation in the prior art references for combining *Carter* and *Yeager*. Rather, the motivation for such a combinations stems from the language in Applicants' claims.

¹⁵ See MPEP §2143.

¹⁶ See MPEP §2143.

¹⁷ MPEP §2143, citing (*In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990)

¹⁸ MPEP §2143, citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

¹⁹ Office Action of May 1, 2006, page 14.

There is no teaching or suggestion in *Carter* to modify the invention for utilizing a heartbeat for network connectivity, as contemplated from the language “determining a heartbeat loss,” in a network configured with a gateway for a network interface. To modify the teaching of *Carter* for the network structure as claimed by Applicants would be beyond the scope contemplated by *Carter*.

Based upon *Carter’s* teaching, it is clear that the Examiner is taking the elements of Applicants’ pending claims and combining them in an improper manner. “It is impermissible to use the claimed invention as an instructions manual or ‘template’ to piece together the teachings of the prior art so that the claimed invention is rendered obvious.”²⁰ Yet that is the very process that the Examiner has attempted to undertake. Most patents may be considered combination patents in which different elements are combined from prior art to achieve a new and useful apparatus and/or method. Although Applicants’ invention may appear to combine elements found in different prior art disclosures, it is the motivation to combine the references that must be in the prior art and not in Applicants’ pending claims.²¹ In the present case, there is no motivation in the prior art to combine *Carter* with *Yeager*, since such a combination would be beyond the scope and teaching of *Carter*.

It is well settled that each statement of obviousness for the purpose of combining each of the numerous references of record must be found and suggested in the references themselves and not only in the fertile mind of the Examiner. The conclusive statements of the Examiner must be based upon specific evidence, suggestions and findings in the references of record relied upon by the Examiner in the rejection of the claimed subject matter. It is respectfully submitted that the record before us lacks any valid reasons to combine the references in the manner done so by the Examiner and contains unsupported reasoning suggested by the Examiner. The Examiner has not established a prima facie case of obviousness with respect to the aforesaid set of claims,

²⁰ *In re Fritch*, 972 F.2d 1260, 1266, 23 USPQ2d 1780 (Fed. Cir. 1992), citing *In re Gorman*, 933 F.2d 982, 987 (Fed. Cir. 1991).

²¹ MPEP §2143, citing (*In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990)).

there being no motivation to combine the references other than that disclosed in the Applicants' specification. "The best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references."²² It is respectfully suggested that the Examiner's rejection under 35 U.S.C. § 103(a) which contains neither teachings nor motivation to combine the references is without merit and must be withdrawn. Accordingly, Applicants respectfully contend that the combination of *Carter* with *Yeager* does not meet the standard set by the CAFC's interpretation of 35 U.S.C. § 103(a), and respectfully requests that the Examiner remove the rejection and direct allowance of claim 28.

VII. Rejection of Claim 29-31 under 35 U.S.C. § 103(a)

The Examiner rejected claims 29-31 under 35 U.S.C. § 103(a) as being unpatentable over *Carter* in view of *Yeager* in view of *Langfahl*. To uphold a rejection under 35 U.S.C. § 103(a) for a dependent claim, all the claim limitations must be taught or suggested by the prior art.²³ In other words, the prior art reference must teach or suggest all limitations of the dependent claim and the independent claim from which it depends. "If an independent claim is nonobvious under 35 U.S.C. § 103(a), then any claim depending therefrom is nonobvious."²⁴ As shown above, Applicants' claims 28 discloses a combination of network connectivity tool, *i.e.* heartbeat, including use of gateway for a network interface. *Carter* fails to teach a computing network configured with a gateway for a network interface, *Yeager* fails to teach a response echo, and *Langfahl* fails to teach use of a heartbeat. Because there is no suggestion to combine the teachings of *Carter*, *Yeager*, and *Langfahl* outside of Applicant's claimed invention to teach all of the limitations of claim 28, neither reference teaches all of the limitations of dependent claims 29-31. Accordingly, Applicant respectfully requests that the Examiner reconsider his rejection and allow claims 29-31.

²² *In re Dembiczak*, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999).

²³ MPEP 2143.03 (citing *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)).

²⁴ *Id.* (citing *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)).

VIII. Rejection of Claims 6, 14, and 20 under 35 U.S.C. §103(a)

In the Official Action of May 1, 2006, the Examiner rejected claims 6, 14, and 20 under 35 U.S.C. §103(a) as allegedly being unpatentable over *Yeager* in view of *Langfahl* and further in view of *Ron Jachim*.

Applicants remarks to *Yeager* and *Langfahl* above are hereby incorporated by reference.

Ron Jachim is an article titled “Application Level Ping: alp”. The article discusses the use of a “ping command to query each significant host and network device.”²⁵ This article further indicates that at the time it was written, application level pings were limited to determining if a socket connection to a server can be established.²⁶

As noted above with the response to claims 1, 9, and 17, there is no teaching, suggestion, or motivation to combine the teachings of *Yeager* and *Langfahl* in the manner applied by the Examiner. *Yeager* does not contemplate use of an ICMP echo, and *Langfahl* does not contemplate use of an ICMP echo in response to loss of a heartbeat. Furthermore, neither *Yeager* nor *Langfahl* teach or suggest the use of an application level ping in the manner claimed by Applicant. For a rejection to stand under 35 U.S.C. §103(a), there must be a suggestion or motivation in the references themselves to modify the reference or combine the teachings.²⁷ Applicants’ invention discloses issuance of an application level ping in response to both an ICMP echo response and a heartbeat loss detection. Accordingly, it is Applicants’ position that there is no motivation, suggestion or teaching to combine the three references under the standard of 35 U.S.C. §103(a).

In order to combine prior art references under 35 U.S.C. §103(a), the prior art references

²⁵ Jachim, “Application Level Ping: alp”, Sys. Admin. Magazine, 1999, page 1, second paragraph.

²⁶ *Id.*, page 3, paragraph 5.

²⁷ See MPEP §2143.

must have a suggestion or motivation to modify the references or combine the teachings.²⁸ “The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination.”²⁹ In other words, “the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in Applicants’ disclosure.”³⁰ As noted by the Examiner, both *Yeager* and *Langfahl* fail to teach an application level ping. The Examiner cited *Ron Jachim* to support the contention that this missing element exists. However, there is no teaching or suggestion in *Ron Jachim* to modify the invention for utilizing an application level ping in conjunction with both a heartbeat and an ICMP echo. To modify the teaching of *Ron Jachim* for application of the application level ping in the manner as claimed by Applicant would be beyond the scope contemplated by *Ron Jachim*. Accordingly, there is no motivation in the prior art references for combining *Yeager* and *Langfahl* with *Ron Jachim*. as the motivation for such a combinations stems from the language in Applicants’ claims.

Based upon *Ron Jachim*’s teaching, it is clear that the Examiner is taking the elements of Applicants’ pending claims and combining them in an improper manner. “It is impermissible to use the claimed invention as an instructions manual or ‘template’ to piece together the teachings of the prior art so that the claimed invention is rendered obvious.”³¹ Yet that is the very process that the Examiner has attempted to undertake. Most patents may be considered combination patents in which different elements are combined from prior art to achieve a new and useful apparatus and/or method. Although Applicants’ invention may appear to combine elements found in different prior art disclosures, it is the motivation to combine the references that must be in the prior art and not in Applicants’ pending claims.³² In the present case, there is

²⁸ See MPEP §2143.

²⁹ MPEP §2143, citing (*In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990)

³⁰ MPEP §2143, citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

³¹ *In re Fritch*, 972 F.2d 1260, 1266, 23 USPQ 2d 1780 (Fed. Cir. 1992), citing *In re Gorman*, 933 F.2d 982, 987 (Fed. Cir. 1991).

³² MPEP §2143, citing (*In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990)).

no motivation in the prior art to combine *Yeager* with *Langfahl* with *Ron Jachim*, since such a combination would be beyond the scope and teaching of *Ron Jachim*.

It is well settled that each statement of obviousness for the purpose of combining each of the numerous references of record must be found and suggested in the references themselves and not only in the fertile mind of the Examiner. The conclusive statements of the Examiner must be based upon specific evidence, suggestions and findings in the references of record relied upon by the Examiner in the rejection of the claimed subject matter. It is respectfully submitted that the record before us lacks any valid reasons to combine the references in the manner done so by the Examiner and contains unsupported reasoning suggested by the Examiner. The Examiner has not established a prima facie case of obviousness with respect to the aforesaid set of claims, there being no motivation to combine the references other than that disclosed in the Applicants' specification. "The best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references."³³ It is respectfully suggested that the Examiner's rejection under 35 U.S.C. § 103(a) which contains neither teachings nor motivation to combine the references is without merit and must be withdrawn. Accordingly, Applicants respectfully contend that the combination of *Yeager* and *Langfahl* with *Ron Jachim* does not meet the standard set by the CAFC's interpretation of 35 U.S.C. § 103(a), and respectfully requests that the Examiner remove the rejection and direct allowance of claims 6, 14, and 20.

IX. Rejection of Claim 24 under 35 U.S.C. § 103(a)

In the Official Action of May 1, 2006, the Examiner rejected claim 24 under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Yeager* in further view of *Langfahl* and further in view of U.S. Patent No. 6,581,166 to *Hirst et al.*, and further in view of U.S. Patent No. 6,363,416 to *Naeimi et al.*

Applicants' remarks to *Yeager* and *Langfahl* above are hereby incorporated by

³³ *In re Dembiczak*, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999).

reference.

U.S. Patent No. 6,581,155 to *Hirst et al.* (hereinafter *Hirst*) pertains to a computing network and determining connectivity among the members of the network. A ping is disclosed as being issued by the operating system. In one embodiment, an ICMP echo is disclosed as being issued by the operating system and sent on two network interfaces. Accordingly, *Hirst* does not teach or suggest issuance of an ICMP echo in response to loss of a heartbeat.

U.S. Patent No. 6,363,416 to *Naeimi et al* (hereinafter *Naeimi*) pertains to election of a node in a computing network as a leader among the other members of the network. Heartbeat messages are periodically transmitted in the network to identify the leader in the network. It is contemplated within *Naeimi* that the nodes in the network may be multi-homed nodes and the messages may be transmitted on both networks. However, there is no teaching or suggestion of use of an ICMP echo responsive to loss of a heartbeat.

As noted above with the response to claim 23, there is no teaching, suggestion, or motivation to combine the teachings of *Yeager* and *Langfahl* in the manner applied by the Examiner. Although *Hirst* teaches the use of a ping structure in the form in an ICMP echo, like the combination of *Yeager* and *Langfahl*, *Hirst* does not teach or suggest issuance of the ICMP echo responsive to failure of a heartbeat detection. With respect to *Naeimi*, again, there is no teaching or suggestion to issue an ICMP echo in response to loss of heartbeat. *Naeimi* has been utilized by the Examiner to teach the use of multi-homed nodes with respect to heartbeat detection in a computing environment. For a rejection to stand under 35 U.S.C. §103(a), there must be a suggestion or motivation in the references themselves to modify the reference or combine the teachings.³⁴ Applicants' invention discloses issuance of an ICMP in response to heartbeat loss, and to communicate the echo on two interfaces of multi-homed nodes. Accordingly, it is Applicant's position that there is no motivation, suggestion or teaching to combine the three references under the standard of 35 U.S.C. §103(a).

³⁴ See MPEP §2143.

In order to combine prior art references under 35 U.S.C. § 103(a), the prior art references must have a suggestion or motivation to modify the references or combine the teachings.³⁵ “The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination.”³⁶ In other words, “the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in Applicants’ disclosure.”³⁷ As noted by the Examiner, each of the prior art references fails to teach issuance of an ICMP echo on two networks of a multi-homed node in response to loss of a heartbeat. The Examiner cited *Naeimi* to support the contention that the multi-homed node exists in the art. However, there is no motivation in the prior art references for combining *Yeager* and *Langfahl* and *Hirst* with *Naeimu*. Rather, the motivation for such a combinations stems from the language in Applicants’ claims.

There is no teaching or suggestion in *Naeimi* to modify the invention for utilizing an ICMP echo in conjunction responsive to a loss of a heartbeat and an ICMP echo. To modify the teaching of *Naeimi* for application of the ICMP echo on both networks of a multi-homed node in the manner as claimed by Applicant would be beyond the scope contemplated by *Naeimi*.

Based upon *Naeimi*’s teaching, it is clear that the Examiner is taking the elements of Applicants’ pending claims and combining them in an improper manner. “It is impermissible to use the claimed invention as an instructions manual or ‘template’ to piece together the teachings of the prior art so that the claimed invention is rendered obvious.”³⁸ Yet that is the very process that the Examiner has attempted to undertake. Most patents may be considered combination patents in which different elements are combined from prior art to achieve a new and useful apparatus and/or method. Although Applicants’ invention may appear to combine elements

³⁵ See MPEP §2143.

³⁶ MPEP §2143, citing (*In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990))

³⁷ MPEP §2143, citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

³⁸ *In re Fritch*, 972 F.2d 1260, 1266, 23 USPQ 2d 1780 (Fed. Cir. 1992), citing *In re Gorman*, 933 F.2d 982, 987 (Fed. Cir. 1991).

found in different prior art disclosures, it is the motivation to combine the references that must be in the prior art and not in Applicants' pending claims.³⁹ In the present case, there is no motivation in the prior art to combine *Yeager* with *Langfahl* with *Hirst*, and further with *Naeimi* since such a combination would go beyond the scope and teaching of *Naeimi*.

It is well settled that each statement of obviousness for the purpose of combining each of the numerous references of record must be found and suggested in the references themselves and not only in the fertile mind of the Examiner. The conclusive statements of the Examiner must be based upon specific evidence, suggestions and findings in the references of record relied upon by the Examiner in the rejection of the claimed subject matter. It is respectfully submitted that the record before us lacks any valid reasons to combine the references in the manner done so by the Examiner and contains unsupported reasoning suggested by the Examiner. The Examiner has not established a prima facie case of obviousness with respect to the aforesaid set of claims, there being no motivation to combine the references other than that disclosed in the Applicants' specification. "The best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references".⁴⁰ It is respectfully suggested that the Examiner's rejection under 35 U.S.C. § 103(a) which contains neither teachings nor motivation to combine the references is without merit and must be withdrawn. Accordingly, Applicants respectfully contend that the combination of *Yeager* with *Langfahl* with *Hirst*, and further with *Naeimi* does not meet the standard set by the CAFC's interpretation of 35 U.S.C. § 103(a), and respectfully requests that the Examiner remove the rejection and direct allowance of claim 24.

X. Rejection of Claim 25 under 35 U.S.C. § 103(a)

In the Official Action of May 1, 2006, the Examiner rejected claim 25 under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Yeager* in further view of *Langfahl* and further in view of U.S. Patent Publication No. 2003/0018927 to *Gadir et al.*

³⁹ MPEP § 2143, citing (*In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990)).

⁴⁰ *In re Dembiczak*, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999).

Applicants remarks to *Yeager* and *Langfahl* above are hereby incorporated by reference.

U.S. Patent Publication No. 2003/0018927 to *Gadir et al.* (hereinafter *Gadir*) pertains to a computing network and determining connectivity among the members of the network. A heartbeat is disclosed as being issued by the operating system. In one embodiment, “[h]eartbeat over the network connection is based on the master probing the slaves using pings and/or RPC (Remote Procedure Call).”⁴¹ *Gadir* does not teach or suggest issuance of an ICMP echo in response to loss of a heartbeat.

The Examiner rejected claim 25 under 35 U.S.C. § 103(a) as being unpatentable over *Yeager* in view of *Langfahl* in further view of *Gadir*. To uphold a rejection under 35 U.S.C. § 103(a) for a dependent claim, all the claim limitations must be taught or suggested by the prior art.⁴² In other words, the prior art reference must teach or suggest all limitations of the dependent claim and the independent claim from which it depends. “If an independent claim is nonobvious under 35 U.S.C. § 103(a), then any claim depending therefrom is nonobvious.”⁴³ As shown above, Applicants’ claim 23 discloses a combination of network connectivity tools including use of both a heartbeat and an ICMP echo. *Yeager* fails to teach use of an ICMP echo, and *Langfahl* fails to teach use of a heartbeat. Because there is no suggestion to combine the teachings of *Yeager* and *Langfahl* outside of Applicants’ claimed invention to teach all of the limitations of claim 23, neither reference teaches all of the limitations of dependent claim 25. Accordingly, Applicants respectfully requests that the Examiner reconsider this rejection and allow claim 25.

XI. Conclusion

Based upon the above remarks, Applicant respectfully requests consideration of the claims. It is submitted that all of the claims in the application are in condition for allowance and such action is respectfully requested. Should any questions arise in connection with this

⁴¹ U.S. Patent Publication No. 2003/0018927, paragraph 35.

⁴² MPEP 2143.03 (citing *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)).

⁴³ *Id.* (citing *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)).

application or should the Examiner believe that a telephone conference with the undersigned would be helpful in resolving any remaining issues pertaining to this application, the undersigned respectfully requests that she be contacted at the number indicated below.

For the reasons outlined above, an allowance of this application is respectfully requested.

Respectfully submitted,

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